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2018 geographic variations in the use of biologic therapy for psoriasis in the Corrona Psoriasis Registry

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Background: There are currently 12 FDA-approved biologic therapies for the treatment of psoriatic disease. Little is known about the real-world use of these medications, both geographically and over time.

Methods: The Corrona Psoriasis Registry is a prospective, multicenter, non-interventional registry for patients with psoriasis under the care of a dermatologist. Frequencies of biologic use were calculated by US Census Divisions for those who initiated biologic therapy at or post-enrollment (initiators), and for those who initiated within 12 months before enrollment (prevalent users) in 2018.

Results: There were 1691 initiators and 1205 prevalent users. Of these 2896 enrollees, 24.5% were in the Northeast, 14.4% in East North Central, 11.9% in Mountain, 17.8% in South Atlantic, 10.7% in East South Central (ESC), 9.5% in West South Central (WSC), and 11.2% in the Pacific. For TNF inhibitors, the ESC had the most frequent number of initiators (29.1%) while the Pacific had the most prevalent users (35.9%) ($P < .001$). For IL-12/23 and IL-23 inhibitors, the Northeast had the most frequent number of initiators (48.9%) while the ESC had the highest number of prevalent users (42.5%) ($P < .001$). The number of patient initiations on IL-17 inhibitors across the nation was uniform (39.1%-49.8%), however the WSC had the most prevalent users (55.8%) ($P < .001$).

Conclusions: There are differences in biologic use across regions in the United States. This registry provides the first opportunity to see these real-world trends. The significance of these will be a pertinent topic for future research.

Commercial disclosure: None identified.

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Utilizing Fibrosis-4 Score to assess risk for hepatic fibrosis in patients with psoriasis on methotrexate

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Introduction: Methotrexate (MTX) is a valuable treatment for psoriasis. Guidelines recommend monitoring liver function tests (LFTs) every 1-3 months, although liver biopsy remains gold standard. Two novel tests, the Fibrosis-4 (Fib-4) score and Fibroscan, have been introduced to assess liver fibrosis noninvasively. This study highlights use of these tools in identifying patients treated with MTX for psoriasis at risk for hepatic fibrosis.

Methods: A retrospective review was conducted to identify patients receiving ≥ 3 months MTX for psoriasis. Cumulative MTX dose, treatment duration, and Fib-4 scores were calculated before and after treatment. If indicated, patients received a Fibroscan.

Results: Thirty-nine patients met inclusion criteria. No association was found between Fib-4 score and cumulative dose or treatment duration. However, ΔFib-4 score was associated with cumulative MTX dose. Diabetes, hyperlipidemia, and statin use are associated with higher Fib-4 scores. Seven patients completed a Fibroscan, which demonstrated that higher Fib-4 scores are associated with an increased median liver stiffness.

Discussion: Lab values alone are inadequate in monitoring for liver disease. Utilizing a combination of LFTs, Fib-4 score, and Fibroscan may be a better approach, and can even eliminate need for unnecessary biopsies in low- or high-risk patients. Intermediate-risk patients should be considered for liver biopsy in the setting of risk factors or persistently elevated labs if MTX is to be continued. Fib-4 system is a useful tool for dermatologists to assess risk for liver fibrosis in patients receiving MTX for psoriasis, even in the setting of normal LFTs, especially in individuals with hepatotoxic risk factors.

Commercial disclosure: None identified.

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Use of direct immunofluorescence in the diagnosis of autoimmune and immunobullous diseases of the esophagus

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Background: Autoimmune and immunobullous diseases of the esophagus are increasingly being recognized as common causes of refractory dysphagia, yet traditional diagnostic approaches to dysphagia using routine H&E staining and endoscopic findings yield non-specific results. Autoimmune/immunobullous disorders are more accurately diagnosed using direct immunofluorescence (DIF), but, aside from case reports, DIF is not used as standard practice for determining a diagnosis in patients with dysphagia. We hypothesized that analysis of esophageal tissue obtained from endoscopies using DIF will enhance the detection of autoimmune/immunobullous blistering disorders of the esophagus in patients with refractory dysphagia.

Methods: We performed a retrospective chart review of patients with dysphagia or an autoimmune indication for an endoscopy and had immunofluorescence testing of the esophageal tissue between 2009 and 2018. The exclusion of patients with multiple DIF readings left 130 total patients.

Results: Analysis of tissue samples using DIF yielded a final diagnosis in 66 (50.8%) of the total 130 samples, the most common being eosinophilic esophagitis, connective tissue disease, pemphigoid, and lichen planus. Analysis of the sensitivity of DIF compared with endoscopic and H&E findings in samples with a final diagnosis of a DIF-diagnosable disorder (ie pemphigoid, pemphigus, etc) resulted in a sensitivity of 86%, 23%, and 27%, respectively.

Implications: Our results demonstrate convincing evidence to suggest the addition of DIF as standard protocol for endoscopy in the diagnostic approach to patients with pertinent autoimmune disease and/or refractory dysphagia.

Commercial disclosure: None identified.

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Pulsed dye laser is more cost-effective than topical brimonidine and topical oxymetazoline for the treatment of erythematotelangiectatic rosacea: A systematic review of the literature and meta-analysis

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We performed a cost-analysis comparing pulsed dye laser (PDL), topical brimonidine, and topical oxymetazoline for treatment of erythematotelangiectatic rosacea (ETR). For the topicals, we calculated the number needed to treat to achieve a two-grade Clinician Erythema Assessment (CEA) improvement. For PDL, physician-reported 50% erythema improvement was used as CEA was not frequently assessed in PDL studies. For the topicals, data was obtained from their phase III trials. For PDL, we performed a meta-analysis of prospective studies evaluating PDL for ETR identified through systematic literature review. Six studies containing 93 patients were analyzed as they reported the outcome of interest. To assess cost, we used the lowest price for the topicals listed on goodrx.com and our institutional PDL cost. In the topical brimonidine and oxymetazoline trials, 55% and 40.1% achieved a two-grade improvement in CEA respectively. In our PDL meta-analysis, 60.2% (56/93) achieved a 50% reduction in physician-reported erythema. PDL patients required an average of 2.96 treatments. Based on the average length of PDL follow-up (14.3 weeks), cost to achieve our outcome of interest was $2159.47 for PDL, $2923.77 for topical brimonidine, and $4567.72 for topical oxymetazoline. This suggests PDL is the most cost-effective modality for treating ETR. Our study likely overestimated PDL cost as PDL likely creates durable improvement beyond the 14.3-week cost-analysis period; whereas, topicals require continued daily application to maintain benefit. Limitations of our study include use of a surrogate outcome to compare efficacy and heterogeneity and poor quality of the PDL studies (eg, no control groups).

Commercial disclosure: None identified.